



Preliminary Amendments to a continuation of application PROTEIN STANDARD FOR ESTIMATING SIZE AND MASS

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Art Unit: 1743

a.) Introductory Comments

This is a continuation of application (Application Number: 10/068,663) filed on February 6, 2002. The claims 48 to 55 are allowed in Office Action mailed on October 10, 2006.

The preliminarily amended claims 39 to 47 are being submitted as part of this CPA.

1. In part (c) of claim 44, the phrase "on a gel" is added to avoid being indefinite.
2. Mizutani (US patent no. 3,880,814) uses a sample solution containing 15 mg of conalbumin having a molecular weight of 87,000, 4 mg of ovalbumin having a molecular weight of 46,000 and 7 mg of lysozyme having a molecular weight of 14,600 on an invented column to demonstrate that the column can separate these polypeptides.

Mizutani fails to teach that these polypeptides together can be used as a protein standard to determine the size and quantity of a protein on a gel simultaneously. The question is if this sample solution can also be used as quantitative protein standard to determine protein size and quantity on a gel. The answer is definitely no. In the previous amendments, the applicant clearly explained why this sample solution cannot be used as a quantitative protein standard on a gel. Another question is if it would have been obvious to one of ordinary skill in the art at the time of the instant invention to make the claimed quantitative protein standard from Mizutani's teaching and using BSA as a standard. The answer is still a definite no.

1. BSA is commonly used in protein quantity estimation. So do other proteins such as lysozyme, IgG, and insulin. Any known protein with known quantity may be used as a protein standard. One of ordinary skill in the art may use any of these proteins as a standard to estimate the quantity of a protein. Mizutani may obtain these proteins from a biotech reagent vendor or vendors. Scientists or technicians of the reagent vendor(s) may use any of these or other proteins as standards to estimate the quantity of